

Anonymity of Peer Review

Peer review of scholarly works goes back to medieval universities. When the Royal Society was established in 1662, the tradition continued at public meetings, probably mindful of the “Star Chamber” in pre-Civil War England, when anonymous witnesses testified against dissidents. Two legal principles were established at that time, of *trial by jury of one’s peers*, and that *justice should be done, and seen to be done*; and these were transferred to evaluation of scientific work. By ‘banging together the heads’ of protagonists in public, it was hoped that truth might emerge. The tradition still exists in some British scientific societies (the *Physiological Society*, in my experience), where, after a paper is read, approval of those present is sought before publication is authorised. The tradition of open peer review survives today in some countries for public examination of doctoral theses. When the Royal Society launched *Philosophical Transactions* in 1665, informal peer review of submitted papers was inaugurated, which became formalised by the Royal Society of Edinburgh in 1731¹. Peer review was subsequently adopted by many journals, but increasingly authors were unaware of the identity of referees. Until ~1950, this presented few problems, since limitation on space was not a critical issue. Peer review served to improve the quality of papers published, rather than as a gatekeeper.

As the number of researchers increased, administrators started to use publications to measure the standing of each researcher. There was increasing competition to publish (especially in prestigious journals), systems of peer review were tightened, and the role of peer review shifted to that of gate-keeper. In recent years ‘anonymous peer review’ has become a widely recognised official ‘seal of approval’, even a guarantor of the truth. Nevertheless, even forty years ago serious criticisms were voiced about anonymity of peer review^{2,3,4}.

Anonymity can be criticised on several grounds. If the true meaning of the word ‘peer’ (‘equal in civil standing or rank’ [O.E.D.]) is used, ‘anonymous peer review’ is an oxymoron, since it defines a power imbalance: It gives power without responsibility to reviewers, especially if there is unwillingness of journals and reviewers to engage in serious back-and-forth debate (and, if necessary, line-by-line scrutiny). It can make or break careers, yet lacks the element of natural justice that one should know one’s accusers. Referees may have a serious conflict of interest, either as academic competitors, or, in the case of research with industrial potential, because they have commercial reasons to suppress inconvenient results. Publishers may wish to avoid lengthy debates, because they slow the flow of articles on which their business depends. Anonymity protects editors from conflict with disappointed authors: The buck can then be passed between editors and referees, with no-one held accountable. Honest dialogue between researchers and the standing of science suffer. In my own field – research on brain mechanisms of serious mental illness - it is sometimes scientifically necessary for authors to reveal their own experiences of illness (and, in other fields of medicine, there are precedents for such self-disclosure going back centuries). In this case, the imbalance of power arising from anonymous peer review, becomes truly grotesque. In a recent conversation with a journalist in a quality U.K. newspaper, my contact poured scorn on anonymous peer review in academic journals. For her, the best guarantee of the authenticity of a personal opinion was a signature at the foot of the piece.

May I suggest the following improvements to the peer review process:

(i) Evaluation of a scientific paper (involving debate about its strengths and weaknesses) should be separated from the decision whether or not to publish. Reviewers should confine themselves to the former, and make no recommendation on the latter.

(ii) The default should be that the identity of reviewers should be known to the authors. Reviewers who, exceptionally, wish to remain anonymous, should explain their reasons to the editor. All discussion between referees and authors should be seen by the editor. Supplementary material (available on-line) would be part of this debate.

(iii) The final decision on whether to publish should be taken by the editor, having seen all preceding correspondence, but bearing in mind other factors, including finances of the journal. The editor's role should be as impartial chairperson, and should seldom take over the role of reviewers.

(iv) When referees evaluate research grant applications similar reasoning applies. However, with tighter time constraints, and applications being definitive statements, I suggest that anonymity should be maintained until the decision has been taken. After that the normal procedure should be that referees' names are revealed to applicants, and referees, in writing their reports, should understand that this will happen.

I believe that these guidelines would foster better dialogue amongst scientists, greater sense of mutual respect from which fruitful collaboration might grow, greater responsibility by referees, reduce paranoia among authors or applicants, and ensure greater transparency of the process.

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1. Spier R. The history of the peer review process. *Trends in Biotechnology*, 2002; 20: 357-358.
2. Cahneman WJ. For the abolition of the anonymity rule. *The American Sociologist*, 1967, 2: 97-98.
3. Neufeld J, Goudsmit SA. To amend refereeing. *Physics Today* 1970, 23: 11.
4. Steinberg AG. Authors, editors and referees. *Science*, 1965; 148: 444

see also: Where Anonymity Breeds Contempt By Julie Zhuo. *New York Times*, November 29, 2010